In the Claims

Amendments to the Claims:

1. (currently amended) A die, comprising:

a substrate; and

~~one~~ two or more different types of pillar structures formed over the substrate in a pattern; at least one of the ~~one~~ two or more different types of pillar structures are bi-layer having a lower high-melting-point non-solder portion and an upper solder material portion over and in substantial contact with only an upper surface of the lower high-melting point non-solder portion; wherein the lower high-melting-point non-solder portion does not melt during a reflow process to form the ~~one~~ two or more different types of pillar structures.

2. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape, a round shape, a ring shape, a wall-like shape or a spline shape.

3. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of from about 789.0 to 1289.0 μm and a width of about 289.0 μm.

4. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of about 789.0 μm and a width of about 289.0 μm.

5. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of about 1289.0 μm and a width of about 289.0 μm.

6. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape and the two or more different types of pillar structures are spaced apart lengthwise by about 500.0 μm center-to-center and by about 211.0 μm end-to-end.

7. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a round shape with a diameter of about 289.0 μm.

8. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a round shape with a diameter of about 289.0 μm; the two or more different types of pillar structures being arranged

at least in part in rows and columns with the adjacent round pillar structures being spaced apart by about 500.0 μm.

9. (original) The die of claim 1, wherein the pillar structure pattern includes a series of rows and columns.

10. (previously presented) The die of claim 1, wherein the pillar structure pattern includes a series of rows and columns; the pillar structures arranged in the series of rows and columns are spaced apart lengthwise by about 500.0 μm center-to-center in the columns and are spaced apart about 211.0 μm end-to-end.

11. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~include~~ includes at least one wall-shaped pillar structure.

12. (currently amended) The die of claim 1, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~include~~ includes at least one wall-shaped pillar structure forming a square.

13. (original) The die of claim 1, including a pillar wall.

14. (canceled)

15. (canceled)

16. (previously presented) The die of claim 1, wherein the lower high-melting-point non-solder portion is comprised of copper coated with oxide, chromium or nickel.

17. (canceled)

18. (canceled)

19. (previously presented) The die of claim 1, wherein the upper solder material portion is comprised of:

from about 60 to 70% tin and from about 30 to 40% lead;

about 63% tin and 37% lead;

about 99% tin and SnAg; or

100%tin.

20. (previously presented) The die of claim 1, wherein the solder material portion is comprised of:

about 63% tin and 37% lead; or

100% tin.

21. (currently amended) The die of claim 1, wherein the pillar structures ~~having~~ each have a total height of from about 60 to 150 μm.

22. (currently amended) The die of claim 1, wherein the pillar structures ~~having~~ each have a total height of about 100 μm.

23. (original) The die of claim 1, wherein the die is used in Surface Acoustic Wave devices and in MEM devices.

24. (currently amended) A die, comprising:

a substrate; and

~~one~~ two or more different types of pillar structures formed over the substrate in a pattern; the ~~one~~ two or more different types of pillar structures having a rectangular shape, a round shape, a ring shape, a wall-like shape or a spline shape; at least one of the ~~one~~ two or more different types of pillar structures are bi-layer having a lower high-melting-point non-solder portion and an ~~coextensive~~ upper solder material portion over and in substantial contact with only an upper surface of the lower high-melting point non-solder portion; wherein the lower high-

10 melting-point non-solder portion does not melt during a reflow process to form the ~~one~~ two or more different types of pillar structures.

25. (currently amended) The die of claim 24, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of from about 789.0 to 1289.0 μm and a width of about 289.0 μm.

26. (currently amended) The die of claim 24, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of about 789.0 μm and a width of about 289.0 μm.

27. (currently amended) The die of claim 24, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of about 1289.0 μm and a width of about 289.0 μm.

28. (currently amended) The die of claim 24, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape and the two or more different types of pillar structures are spaced apart lengthwise by about 500.0 μm center-to-center and by about 211.0 μm end-to-end.

29. (currently amended) The die of claim 24, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a round shape with a diameter of about 289.0 μm.

30. (currently amended) The die of claim 24, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a round shape with a diameter of about 289.0 μm; the two or more different types of pillar structures being arranged at least in part in rows and columns with the adjacent round pillar structures being spaced apart by about 500.0 μm.

31. (original) The die of claim 24, wherein the pillar structure pattern includes a series of rows and columns.

32. (previously presented) The die of claim 24, wherein the pillar structure pattern includes a series of rows and columns; the pillar structures arranged in the series of rows and columns are spaced apart lengthwise by about 500.0 μm center-to-center in the columns and are spaced apart about 211.0 μm end-to-end.

33. (currently amended) The die of claim 24, wherein the ~~one~~ two or more different types of pillar structures include at least one wall-shaped pillar structure.

34. (currently amended) The die of claim 24, wherein the ~~one~~ two or more different types of pillar structures include at least one wall-shaped pillar structure forming a square.

35. (original) The die of claim 24, including a pillar wall.

36. (canceled)

37. (canceled)

38. (previously presented) The die of claim 24, wherein the lower high-melting-point non-solder portion is comprised of copper coated with oxide, chromium or nickel.

39. (canceled)

40. (canceled)

41. (previously presented) The die of claim 24, wherein the upper solder material portion is comprised of:

from about 60 to 70% tin and from about 30 to 40% lead;

about 63% tin and 37% lead;

about 99% tin and SnAg; or

100%tin.

42. (previously presented) The die of claim 24, wherein the upper solder material portion is comprised of:

about 63% tin and 37% lead; or

100%tin.

43. (currently amended) The die of claim 24, wherein the pillar structures ~~having~~ each have a total height of from about 60 to 150 μm.

44. (currently amended) The die of claim 24, wherein the pillar structures ~~having~~ each have a total height of about 100 μm.

45. (original) The die of claim 24, wherein the die is used in Surface Acoustic Wave devices and in MEM devices.

46. (currently amended) A method of forming a die, comprising the steps:

providing a substrate; and

forming ~~one~~ two or more different types of pillar structures over the substrate in a pattern; at least one of the ~~one~~ two or more different types of pillar structures ~~are~~ is bi-layer having a lower high-melting-point non-solder portion and an ~~coextensive~~ upper solder material portion over and in substantial contact with only an upper surface of the lower high-melting point non-solder portion; wherein the lower high-melting-point non-solder portion does not melt during a reflow process to form the ~~one~~ two or more different types of pillar structures.

47. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape, a round shape, a ring shape, a wall-like shape or a spline shape.

48. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of from about 789.0 to 1289.0 μm and a width of about 289.0 μm.

49. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of about 789.0 μm and a width of about 289.0 μm.

50. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape with a length of about 1289.0 μm and a width of about 289.0 μm.

51. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a rectangular shape and the two or more different types of pillar structures are spaced apart lengthwise by about 500.0 μm center-to-center and by about 211.0 μm end-to-end.

52. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a round shape with a diameter of about 289.0 μm.

53. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~have~~ has a round shape with a diameter of about 289.0 μm; the two or more different types of pillar structures being arranged at least in part in rows and columns with the adjacent round pillar structures being spaced apart by about 500.0 μm.

54. (original) The method of claim 46, wherein the pillar structure pattern includes a series of rows and columns.

55. (previously presented) The method of claim 46, wherein the pillar structure pattern includes a series of rows and columns; the pillar structures arranged in the series of rows and columns are spaced apart lengthwise by about 500.0 μm center-to-center in the columns and are spaced apart about 211.0 μm end-to-end.

56. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~include~~ includes at least one wall-shaped pillar structure.

57. (currently amended) The method of claim 46, wherein ~~the~~ at least one of the two or more different types of pillar structures ~~include~~ includes at least one wall-shaped pillar structure forming a square.

58. (original) The method of claim 46, including a pillar wall.

59. (canceled)

60. (canceled)

61. (previously presented) The method of claim 46, wherein the lower high-melting-point non-solder portion is comprised of copper coated with oxide, chromium or nickel.

62. (canceled)

63. (canceled)

64. (previously presented) The method of claim 46, wherein the upper solder material portion is comprised of:

from about 60 to 70% tin and from about 30 to 40% lead;

about 63% tin and 37% lead;

about 99% tin and SnAg; or

100%tin.

65. (previously presented) The method of claim 46, wherein the upper solder material portion is comprised of:

about 63% tin and 37% lead; or

100%tin.

66. (currently amended) The method of claim 46, wherein the pillar structures ~~having~~ each have a total height of from about 60 to 150 μm.

67. (currently amended) The method of claim 46, wherein the pillar structures ~~having~~ each have a total height of about 100 μm.

68. (original) The method of claim 46, wherein the die formed is used in Surface Acoustic Wave devices and in MEM devices.

69. (previously presented) The method of claim 1, wherein the lower high-melting-point non-solder portion is comprised of copper.

70. (previously presented) The method of claim 24, wherein the lower high-melting-point non-solder portion is comprised of copper.

71. (previously presented) The method of claim 46, wherein the lower high-melting-point non-solder portion is comprised of copper.